

August 31, 2016

Joan McVaugh
Franklin Township
20 Municipal Lane
Kemblesville, PA 19347

RE: Gourmet's Delight Mushroom

Dear Ms. McVaugh:

Enclosed are revised plan sets and reports for the above referenced project. The enclosed plans respond to the Township Engineer's review letter dated 25 August 2016. Following are responses to the comments in the review letter. The comments from the letter are listed in normal text. The responses to each comment are indicated in ***bold italic text***.

I. CONFORMANCE WITH THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE - CHAPTER 22

1. Section 22-410. Refer to the specific section in this review for comments related to Stormwater Management.

Comment noted.

2. Section 22-722. Sewage. See separate review from the Township's sewage consultant.

Comment noted.

II. TRAFFIC, SITE ACCESS AND INTERNAL CIRCULATION REVIEW - CHAPTERS 22 AND 25

1. Regarding the information provided for the proposed entrance along Auburn Road:
 - a) A curb taper detail should be noted/provided for the ends of the proposed curbing.

A curb taper detail has been added on Sheet #9 and specified on Sheet #3.

- b) A detailed plan will be needed to show how roadside drainage will be addressed. We feel this can be addressed at the time of construction.

Note #13 has been added to Sheet #5 stating that the roadside drainage shall be field determined at the time of construction.

- c) For the “enter right” detail, the layout must be revised as the truck starting position is in the wrong lane of Auburn Road.

The entrance configuration has been modified to address this comment.

- d) For the “exit right” detail, the layout must be revised as the truck starting position is in wrong lane of the proposed driveway and the maneuver encroaches into the oncoming lane of Auburn Road.

The entrance configuration has been modified to address this comment.

- e) Limits of tree/brush removal should be clearly noted.

The limits of the tree/brush removal have been identified on the revised plans.

III. STORMWATER MANAGEMENT REVIEW - CHAPTER 19

- 1. Section 19-302.A-E. All regulated activities shall have approvals from the applicable agencies prior to, or as a condition of, plan approval. These approvals need to be obtained.

Comment noted.

- 2. Section 19-303.1-3. No regulated activity within the Municipality shall commence until approvals have been issued by PADEP and the Chester County Conservation District. These approvals need to be obtained.

Comment noted.

- 3. Section 19-312.3.J. When deemed necessary by the Municipality, stormwater basin facilities shall be enclosed with a fence of a type, size, location and character acceptable to the Municipality. The applicant should discuss this with the Township. We are not aware of fencing being required on privately owned facilities in the past.

Comment noted.

- 4. Section 313.1 .E. & 312.1.F. Easements shall be provided for all basins and all conveyance and collection systems that are not located within street rights-of-way and shall be a minimum of 20 feet in width. Easements shall meet the applicable requirements in §19-704. A blanket easement is proposed for the stormwater facilities, according to Note 20 on Sheet 1. The Township Solicitor should review the language and determine the proper vehicle to establish this easement.

Comment noted.

5. Section 19-402.1.A. Note on the maps shall refer to the associated computations and erosion and sediment control plan by title and date. The added note #15 on Sheet 7 will need to be updated to reflect the appropriate dates.

Note #15 on Sheet #7 has been updated with the appropriate dates.

6. Section 19-402.2.A.(3). The required signature block has been added and shall be signed, prior to plan recording.

Plans will be signed prior to plan recording.

7. Section 19-402.2.A.(4).(a). The required signature block shall be signed and sealed, prior to plan recording.

Plans will be signed and sealed prior to plan recording.

8. Section 19-402.2.B.(14). Complete delineation of the flow paths used for calculating the time of concentration for the predevelopment and post-construction conditions shall be included. Drainage areas and the corresponding flow paths need to be consistently modeled between the pre and post development conditions. Pre-development DA #1 and #2, and post-development DA #1 and DA #2 need to be adjusted accordingly.

A color drainage map has been included with the revised report that clarifies the drainage areas.

9. Sections 19-402.2.F.(1)-(4) & 19-703. An Operations & Maintenance (O&M) Plan and agreement will need to be executed.

A copy of a signed O&M agreement will be submitted under separate cover.

10. Section 19-402.2.G. The plan needs approval from the Chester County Conservation District and/or PaDEP for an NPDES permit.

Comment noted.

11. With the revised site layout in the area of the proposed Agricultural Waste Lagoon (tank) and “dip pit”, an extension of the storm sewer profile needs to be shown, that includes elevations for the pit. Manhole #9 and the point of entry into the lagoon tank. We agree with the proposed overflow sequence, reaching inlet 1-7 as a potential emergency measure, though the design of the system will be coordinated with the NRCS according to the response letter. The plan needs to show that this sequence will work with the elevations shown on the grading and profile sheets. It would be helpful to have a graphic

representation of the lagoon tank, showing the expected operational water elevation range, the available volume for storm events up to the 100-year storm, and required freeboard.

A schematic of the wharf, dip pit and gray water tank have been added to the dirty water profile on Sheet #11.

12. Calculations are now provided for the requested storm sewer runs leading towards the Dip Pit. However, they appear to show separate flows from I-31 for each leg of the storm sewer collection system. These flows must be combined to ensure proper pipe sizing from I-31.

Storm sewer calculations have been revised to include combined flows for the pipe run from Inlet I-31 to the dip pit.

13. Related to the wet pond:

- We agree with the proposed deferment of soil testing to wet pond construction, however the notes added to the construction sequence, as stated in the response letter, could not be found.

Please refer to Note #8 of the “Sediment Basin Conversion to Permanent Wet Pond Sequence”.

- The detail for the basin needs to provide information regarding the 6” Valterra knife gate valve location and housing, to provide access for use and protection against damage.

The basin detail has been revised to show details of the proposed 6” Valterra knife gate.

14. Regarding the available storage volume, clarification needs to be provided regarding the design elevation for the water in the wet pond and the configuration of the outlet structure. With the 6-inch orifice in the internal weir wall as shown, the water elevation would be 385.00. If the orifice is actually part of the 6-inch pipe and de-watering system, then the pond water elevation is 389.00. We assume the 389.0 elevation is intended to provide the most water retention possible.

The 4’X6’ outlet box detail has been modified to clearly show that the 6-inch pipe and valve are to be isolated from the main orifice and weir that controls the pond elevation and release. It will only be used to drain the pond for maintenance.

In addition, the routing appears incorrect, as the volume of the wet pond cannot be used as detention storage volume. The water elevation of the wet pond must be the starting point for the “detention” aspect of the wet pond.

The starting elevation for the routing is set in the model at the 389.0'. Please refer to Page 26 of the PCSM report, approximately 1/3 of the way down the page it shows that the starting water elevation is 389.0'.

15. The following is a list of waivers required per the presented plan set:

- Section 19-312.1.A.(2). Basins shall be 50 feet from any property line. The Wet Pond is located less than 50 ft. from the property line to the north (other lands of Gourmet's Delight Mushrooms, LP, located in the adjoining Township).

Proximity of common boundary line with the lands owned by Gourmet will have no impact on the function of the stormwater management facilities.

- Section 19-313.3.B. All pipes shall be reinforced concrete Class 111 or better, meeting PennDOT's 100-year life criteria. HDPE Pipe is being proposed.

HDPE Pipe recommended by Township Engineer.

- Section 19-313.3.E. The minimum cover of stormwater pipe shall be 24 inches.

Standard concrete endwall/headwall design does not provide for 24 inches of cover.

- Section 19-313.4.N. Inlets in paved areas shall be equipped with bicycle safe grates.

High capacity grates were acknowledged by the Township Engineer as being more appropriate for this application and reduce the potential for clogging.

- Section 19-313.4.S. Adjustment rings shall only be made of a single pre-cast concrete structure, a maximum of 6 inches in height.

The overall dimensions of the structure preclude the utilization of single pre-cast concrete structures.

Based on the Township Engineer's initial Review Letter dated 26 May 2016 and a meeting that took place on 21 June 2016 with the Township Engineer and other Township representatives, it was suggested that Gourmet's request five (5) waivers from the requirements of the Stormwater Management Ordinance pursuant to Section 19-109. In each instance, the alternative standard will result in equal or better stormwater management controls for the reasons noted above.

16. The following is a list of plan "typos" found on the current plan set:

- a) For the Dry well #1 Detail on Sheet 9, please make reference to Sheet 7 for the pipe length schedule, or include the pipe information with the detail on Sheet 9.

This reference has been added as Note #3 on the Drywell Detail on Sheet #9.

- b) The plan legend needs to show the riprap hatching indicated on the drawings. This hatching needs to be shown on Sheet 7 as being up the sides all the way around the forebay, as stated in the response letter, and needs to show the extents of the riprap to either side of the spillway.

The entire forebay and the area on both sides of the weirs are now shown with riprap armament.

- c) The details on Sheet 8 need to show R-5 riprap placed on both sides of the concrete weirs to the Wet Pond and the Infiltration Basin, respectively. It is recommended to provide a cross-section through the forebay and the respective weirs for the infiltration basin and the wet pond for clarification.

Riprap has been indicated in the areas requested.

- d) Pipe run 1-8 to EW-1 was modified to address an earlier comment. The profile drawing should be revised to reflect the change in outlet pipe elevation.

The profile has been revised accordingly.

- e) The Wet Pond Level Spreader information on Sheet 9 should include a plan view showing the overall length of the stone trench. Two differing dimensions are shown for the pipe diameter, 1.25' and 1.75'. These need to agree.

The 1.25' dimension is the interior diameter of the pipe. The 1.75', should actually be 1.58', is the exterior dimension of the pipe accounting for the pipe wall thickness. This dimension was noted for purposes of dimensioning the stone in the trench.

- f) The Permanent Wet Pond section on Sheet 8 needs to be revised to eliminate the Type D-H Endwall and riprap apron and show the proposed level spreader configuration.

The endwall and riprap has been removed.

- g) The profiles on Sheets 10 and 11 should be revised to illustrate EW-1.

The profile has been revised.

- h) The profile for HW-1 to I-27 should be revised to show an invert (in) of 399.18 from HW-1 and the pipe slope revised from 3.68% to 2.52%.

The invert and slope have been corrected.

- i) Revise the depth entry on the chart on Sheet 9 to 2.5 feet for Dry well #1 to be consistent with the report.

The drywell has been corrected.

- j) Correct the inlet labeling on Sheet 11 regarding inlets I-38, I-37, and I-31.

The labels have been corrected on these three inlets.

- k) Revise the 12" orifice elevation shown in the Wet Pond on Sheet 7 (386.00) to be consistent with the outlet structure detail on Sheet 8 (385.00).

This inconsistency has been corrected.

IV. GENERAL COMMENTS

- 1. We recommend Input from the local fire department be obtained.

Comment noted.

- 2. The applicant should be in contact with the Township Building Code Official to review and discuss various zoning and building code aspects that are applicable to this project such as a zoning permit, an electrical service permit, and permits for retaining walls.

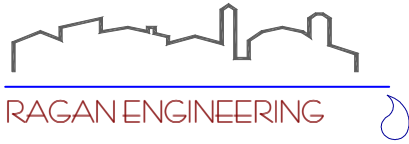
Comment noted.

- 3. As the plan moves forward, the applicant should be aware that financial security will be required to be posted for the stormwater related aspects of the project, including, inlets, piping, basins, E&S controls, etc.

The Applicant is in the process of preparing a cost opinion for the site improvements and will provide it to the Township for review prior to plan approval.

- 4. This plan should reflect all the underlying items from the related minor subdivision plan.

There are no underlying items related from the minor subdivision plan that need to be incorporated into this land development plan.



We trust that the revised plans/reports and this letter adequately address your engineer's comments. However, should you need any additional information, please do not hesitate to contact me.

Very truly yours,

RAGAN ENGINEERING Associates, Inc.

A handwritten signature in black ink, appearing to read "Ronald I. Ragan". The signature is fluid and cursive, with a long horizontal stroke at the end.

Ronald I. Ragan, PE
Project Engineer

Attachment

Cc: G. Valentino, Gourmet's Delight Mushrooms